



European Steel Design Awards 2023

Steel is recognized for its high potential in terms of strength, durability, design flexibility, adaptability, recyclability and reusability. Today's steel structures allow the best adaptation to modern life and renovation of historical elements of our built environment, being in cities or countryside. Steel is also the perfect material for reaching a circular economy while leaving the necessary room for creativity in design.

The European Steel Design Awards are given by the European Convention for Constructional Steelwork (ECCS) every two years to encourage the creative and outstanding use of steel in architecture. The awards are dedicated to the owners, the architects, the engineers, the general contractors and the steelwork contractors.

ECCS is the European Federation of National Associations of Steelwork Contractors, the unique platform gathering all the actors of the sector: steel producers, contractors, researchers and academics. ECCS is a federation of 15 National Associations of steelwork contractors: www.steelconstruct.com

The Professional Jury met in the ECCS headquarter on 13 June 2023:

Annamarie HAGOORT, The Netherlands, ECCS President and Chairwoman of AC4 Architectural Awards Committee;

Bernhard HAUKE, Germany, Chairman of Promotional Management Board of ECCS;

Klaus THÜRRIEDL, Austria, President European Council of Engineers Chambers (ECEC);

Karel TERWEL, The Netherlands, Engineer, IMD Ingenieurs;

Joost VOS, The Netherlands, Architect, Benthem Crouwel Architects.

The European Steel Design Awards 2023 nominees have been selected out of 18 projects submitted in total by the ECCS member associations. The overall winner ESDA 2023 Laureate will be announced at the ESDA Ceremony held on 12 September 2023 in Amsterdam.

European Steel Design Awards 2023 and nominees for the ESDA 2023 Laureate are (by country alphabetical order):

Austria: Neue Eisenbahnbrücke Linz


The "New Railway Bridge" in Linz is the replacement for the old riveted steel construction opened in 1900, which led over the Danube with a total of 3 arches. A two-lane city road runs on the new bridge, generous footpaths and cycle paths have been laid out on the outer sides, and in future the two city railway tracks will also be routed over the Danube. In view of its location in the city, the area above the Danube was also equipped with benches.

The bridge has led to an extreme upgrading of the riverside areas on both sides.

<p><u>Owner:</u> Stadt Linz</p> <p><u>Engineer:</u> KMP ZT GmbH</p> <p><u>Architect:</u> Marc Mimram Architecture & Associés</p>	<p><u>General Contractor:</u> ARGE Neue Donaubrücke Linz (MCE/Strabag/Porr)</p> <p><u>Steelwork Contractor:</u> MCE GmbH</p>
 <p>© Erieta Attali</p>	

Denmark: Kangiata Illorsua - Ilulissat Icefjord Centre

Ilulissat Icefjord Center is a new unique experience and research centre near the UNESCO-protected area of The Ilulissat Icefjord in West Greenland. The building is shaped in an elegant curve that gently floats over the valley at Seremiut, where visitors will experience a spectacular view over the ice fjord. The Icefjord Centre was designed to harmonize with the stunning yet delicate natural environment surrounding it. The structure is solved by a complex relationship between form, construction, and sustainability. Where the curved wing shape is created by the primary structure of 52 individually designed steel frames, each weighing around 8 tons.

<p><u>Owner:</u> Realdania By & Byg</p> <p><u>Engineer:</u> Søren Jensen Rådgivende Ingeniørfirma A/S</p> <p><u>Architect:</u> Dorte Mandrup Arkitekter A/S Kristine Jensen Landskab & Arkitektur ApS</p>	<p><u>General Contractor:</u> KJ Greenland A/S</p> <p><u>Steelwork Contractor:</u> Give Steel A/S</p>
 <p>Fotograf: Adam Mørk</p> <p>© Adam Mørk</p>	

Finland: Terminal 2 extension of Helsinki-Vantaa Airport

The new departures and arrivals building of Helsinki Airport comprises two distinct volumes: the first one defined by its wooden ceiling, the second by its blue color. In addition to the departures and arrivals halls, the building contains a multimodal travel center and the areas for security control, customs and baggage reclaim. As the new building connects directly to the airport’s old terminal 2 building, it follows the traditional logic of separating the flows of departing and arriving passengers onto different levels. The project that started with a design competition launched in 2016, has been built according to the BREEAM Excellent standards as one of the first alliance projects in Finland – successfully within the given timeframe and budget, and with the airport remaining fully functional throughout construction.

<u>Owner:</u> Finavia Oyj	<u>General Contractor:</u> SRV Group Plc
<u>Engineer:</u> Ramboll Finland Oy	<u>Steelwork Contractor:</u>
<u>Architect:</u> ALA Architects	Peikko Finland Oy
	Aulis Lundell Oy
	Turun Pelti ja Eristys TPE
	Nordec Oy



© Timo Koivisto

France: Luma Tower

The contract for the Luma Tower was signed in 2014 and the project was completed in June 2021: 10 000 m², mixed of opacity reflecting the light and transparency. The 4500 m² opaque walls are made up of 300 stiffened 3D shells in 3mm stainless steel + stiffener 8 mm, total 380 t. On external side, the 11 000 SS bricks build-up of 1mm thick plate weighing 90 t are used as cladding and signature of the building. on the inside the shell system support the sprayed insulation (250 mm thickness). At ground level, the rotunda 3500 m², 56 m diameter and 16 m high is made of 400 t reconstituted rectangular section S355 Carbon Steel hot deep Galvanized supporting insulated glazing.

Owner : Luma Foundation

Engineer: Tess, Eiffage Metal

Architect: Gehry Partners

General Contractor: joint venture Eiffage Metal/
Vinci Construction France


Steelwork Contractor: Eiffage Metal (Smulders /
lemants)



© Hervé Hote

Luxembourg: Dethlinger Teich

The Lower Saxony Ministry of the Environment is supporting to elaborate clean-up of this armament waste site, which is unique in Germany. After the Second World War, the pond in Niedersachsen was filled in. The ministry assumes that there are more than 100,000 different ordnance items in the pond, which is ten to twelve metres deep. An investigation of a neighbouring groundwater body based on 150 measuring points had revealed a massive contamination with explosive ordnance degradation products. The 97 m free span building provides the necessary safety while the site is being rehabilitated and ensure that toxic gases can only escape via the installed filter systems for the protection of the population during the actual renovation of the pond.

<p><u>Owner:</u> Dethlinger Teich</p> <p><u>Engineer:</u> Astron Buildings SA</p> <p><u>Architect:</u> Astron Buildings SA</p>	<p><u>General Contractor:</u> Cornils GmbH</p> <p><u>Steelwork contractor:</u> Astron Buildings SA</p>
 <p>© Astron Buildings SA</p>	

Norway: Espenes Rest Stop

When the former rest area at Espenes disappeared because of the protection against landslides of National Road 13, an empty area was left behind. This area has now been given new life. At this nice and idyllic spot between Odda and Kinsarvik, a modern tourist route facility has been built. The project consists of a 64- meter-long and 4-meter-wide structure in stainless steel, with 12 roof modules of varying heights, all welded together on-site.

Owner: Statens Vegvesen and Nasjonale Turistveger
Engineer: Dipl.-Ing. Florian Kosche AS (DIFK),
Architect: Code Arkitektur AS

General Contractor: Brun Bygg AS
Steelwork Contractor: Størksen Rustfri Industri AS



© Code Architecture

Poland: Sport and entertainment hall in Lubelska Street, Puławy

The sport and entertainment hall Lubelska Street in Puławy is a building adapted to the organization of various sports and entertainment events such as conferences, fairs and congresses with the audience on 3,286 permanent and temporary stands in total. Main dimensions of the hall building are 85.22 m x 62.73 m x 19.53 m (length x width x height).

<p><u>Owner:</u> Urząd Miasta Puławy</p> <p><u>Engineer:</u> Archimedia sp. z o.o. Biuro Architektoniczne</p> <p><u>Architect:</u> Marka Pracownia Architektoniczna Janusz Gąsiorowski, Tomasz Kozłowski</p>	<p><u>General Contractor:</u> Konsorcjum Mostostal Puławy S.A.(lider) , Mostostal Warszawa S.A. (członek)</p> <p><u>Steelwork Contractor:</u> Mostostal Puławy S.A</p>
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© Mostostal Puławy SA

Portugal: Multimodal Train Station in Mons, Belgium

The partial modernisation of the multimodal station of Mons has been designed by architect Santiago Calatrava. The new Gare de Mons was developed as a symbol of the synergies between culture and technology in the city of Mons. The city has a very rich historical and architectural heritage and is the cultural capital of the Walloon Region.

<p><u>Owner:</u> SNCB - Société Nationale des Chemins de fer Belges</p>	<p><u>General Contractor:</u> SNCB - Société Nationale des Chemins de fer Belges</p>
<p><u>Engineer:</u> Bureau Pirnay</p>	<p><u>Steelwork Contractor:</u> MARTIFER – Construções Metalomecânicas, S.A</p>
<p><u>Architect:</u> Santiago Calatrava Architects & Engineers</p>	



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Sweden: Varvsbron, Helsingborg

‘Varvsbron’ is a highly inventive pedestrian and cycle bridge; and a key part of The City of Helsingborg’s plans to develop vibrant new neighbourhoods and revitalise its urban harbour. In 2014 the international competition was won with an innovative design which shares characteristics with both suspension and cable-stayed structures. The bridge’s two pylons lean dramatically away from each other, with primary support cables swooping between to ‘cradle’ the deck from below rather than simply connect to the deck edge, as is typical for traditional cable-stayed structures. The gently inclined sinuous form of the bridge successfully resolved complex site requirements and created a dynamic centrepiece for the city’s new ‘urban archipelago’, Oceanhamnen. The team’s up to date use of parametric modelling merged design and analysis processes and created a seamless transition between traditionally distinct stages of design, fabrication, and installation, which ultimately made this distinctive bridge more sustainable, structurally efficient, and cost-effective.

<p><u>Owner:</u> Helsingborgs Stad (The City of Helsingborg)</p> <p><u>Engineer:</u> Ramboll Sweden AB Centerlöf&Holmberg, Malmö Leonhardt, Andrä und Partner, Stuttgart Luxera AB, Malmö (Lighting design)</p>	<p><u>Architect:</u> Ramboll Sweden AB/Ramboll UK</p> <p><u>General Contractor:</u> PEAB</p> <p><u>Steelwork Contractor:</u> Stål-och Rörmontage, Sölvesborg, Sweden</p>
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The Netherlands: BioPartner 5

Much of the emphasis was on the main structure, because it accounts for 38% of the total shadow costs. This makes the main structure the largest emission source of all building components. BioPartner 5 is an assembly of materials with the lowest possible carbon footprint. It is the first large-scale application of the Donor Skeleton principle: used building materials have been reused on a large scale. The building is constructed from as much as 165,000 kilograms of reused structural steel that for 50 years formed the basis of a nearby Leiden University laboratory building. Together with the entire project team, a doubly sustainable building was realised. Besides reusing existing steel members, the new structure was designed to be easily deconstructed again the end of its service life. Together with all the energy consumption measures, this has resulted in the first 'Paris-proof' building completed in the Netherlands.

Owner: BioPartner Center Leiden

Engineer: Imd Raadgevende Ingenieurs

Architect: Popma ter Steege Architecten

General Contractor: De Vries en Verburg, Stolwijk

Steelwork Contractor: Vic Obdam Staalbouw



© René de Wit

Turkey: BIVA TOWER, Izmir, Turkey

BIVA Tower, located in Bayraklı, the new heart of Izmir, is currently the tallest structural steel building in Turkey with a height of 144 meters from foundation level. The prominent residential tower hovers over the Izmir Bay as it embraced the slogan "The Dance of Luxury and Steel". The 33 story building stands out amongst its piers with its pioneering structural engineering features as well as its striking architectural design. The total construction area of the project is 20,000 m² rising over 1500 m² plot area. Due to the architectural design, the narrowing of the tower projection area towards the lower floors gives the building an aesthetic appearance, but it is a challenging element in terms of structural design. The fact that the project site is in a high-risk seismic zone and has a weak ground profile with liquefaction potential has been the main determining factor in constructing the structural steel of the building's structural steel. In the light of these adverse conditions and architectural needs, it has become inevitable to make advanced engineering designs and produce innovative solutions.

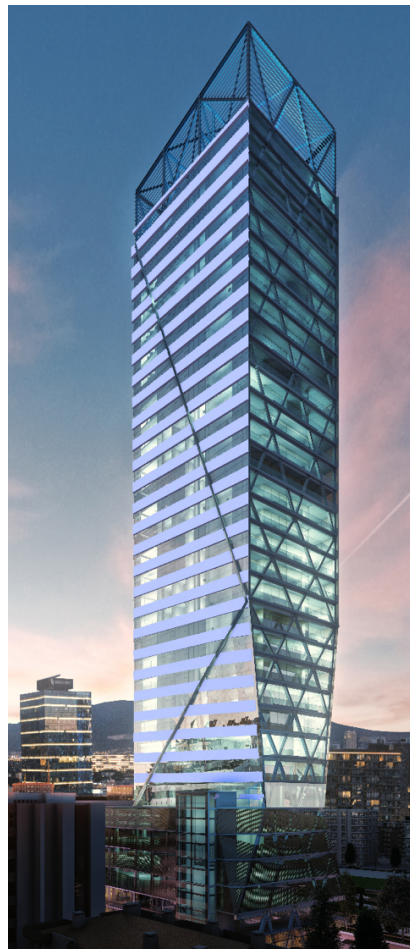
Owner: BIVA Architecture Engineering Construction Co.

Engineer: MEINHARDT (Turkey) Engineering & Consulting LLC

Architect: BIVA Architecture Engineering Construction Co.

General Contractor: BIVA Architecture Engineering Construction Co.

Steelwork Contractor: GÜLERMAK Heavy Industries Cons. & Cont. LLC



© BIVA Architecture



The Awards Ceremony for the European Steel Design Awards 2023

The National nominees will be rewarded during the ESDA 2023 Ceremony which will take place in Meervaart convention centre in Amsterdam on 12 September 2023 afternoon. The Laureate and Special Awards will be selected among these nominees and announced during the ceremony. A second press release for the overall winners (Laureate and Special Awards) will be published after the ceremony in Amsterdam, in the frame of the EUROSTEEL 2023 conference: www.eurosteel2023.org

The winning projects will be published on the ECCS website: www.steelconstruct.com. They will also be published in the ECCS *Steel Construction* journal 4/2023.

The material may be used for press-information and publications referring to ECCS European Steel Awards 2023. Copyrights of photos must be mentioned, however. Please always include also the ESDA-2023 logo. Any form of advertising is excluded.

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